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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,299	04/27/2006	Sebastian Egner	NL03 1248 US1	5154

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EXAMINER	
CHU, RANDOLPH I	

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/577,299	EGNER ET AL.	
	Examiner	Art Unit	
	RANDOLPH CHU	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/27/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 9-11 and 20 objected to because of the following informalities: Product / device claims are depended on method claim. Appropriate correction is required.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 9-11 and 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

3. With respect to claim 9 is all directed to a distributed software agent. "Computer program" refers to software, which is functional descriptive material, which per se is nonstatutory. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases. Please refer to "United States Patent and Trademark Office OG Notices: 22 November 2005" Annex IV for further guidance.

4. Claim 11 as a whole define(s) a data carrier, and "[a] transitory, propagating signal … is not a "process, machine, manufacture, or composition of matter." Those four categories define the explicit scope and reach of subject matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter." (*In re Nuijten*, 84 USPQ2d 1495 (Fed. Cir. 2007)).

5. Claims 1-9 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. Supreme Court precedent[1] and recent Federal Circuit decisions[2] indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the

[1] *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).
[2] *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process. For example the processing gesture signal method including steps of processing and filtering is of sufficient breadth that it would be reasonably interpreted as a series of steps completely performed mentally, verbally or without a machine.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4, 8-11, 12-15, 19 and 20 are rejected under 35 USC 103(a) as being unpatentable over Ehud et al. (EP 0 666 543) in view of Gustafsson ("Determining the Initial States in Forward-Backward Filtering" IEEE Transaction on Signal Processing, Vol. 44 No. 4 April 1996, Pages 988-992).

With respect to claim 1, Ehud et al. teach one or more segments, each segments comprising one or more samples (para. [0051]-[0058]) , the step of filtering one or more segments by applying an infinite impulse response filter (para. [0061]-[0066], Butterworth filter) .

Ehud et al. does not teaches expressly that applying an infinite impulse response filter both in a forward and in a backward temporal direction, so as to produce a band-limited signal.

Gustafsson teaches applying an infinite impulse response filter both in a forward and in a backward temporal direction, so as to produce a band-limited signal (Page 988, I. introduction).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply an infinite impulse response filter both in a forward and in a backward temporal direction in the method of Ehud et al.

The suggestion/motivation for doing so would have been that to obtain uniqueness and to remove transients at both ends.

Therefore, it would have been obvious to combine Gustafsson with Ehud et al. to obtain the invention as specified in claim 1.

With respect to claim 2, Gustafsson teaches wherein the infinite impulse response filter applied in the forward temporal direction has forward initial conditions and the infinite impulse response filter applied in the backward temporal direction has backward initial conditions, the method further comprising the step of matching the forward and backward initial conditions. (Page 988, I. Introduction and II. Determining the Initial State).

With respect to claim 3, Ehud et al. teach interpolating the sampled signal, and resampling the interpolated signal at a relatively high frequency, so as to produce a gesture signal having a well-defined sampling rate which can then be appropriately filtered (para [0058]).

With respect to claim 4, Ehud et al. teach the step of interpolating the sampled signal involves a linear interpolation (para [0058]).

With respect to claim 8, Ehud et al. teach the step of recognizing handwriting on the basis of the interpolated, resampled and filtered signal (para. [0051]-[0066]).

With respect to claim 9, Ehud et al. teach a software program for carrying out the method according claim 1 (para [0101]).

With respect to claim 10, Ehud et al. teach data carrier comprising the software program according to claim 9 (para [0101]).

With respect to claim 11, Ehud et al. teach a device for processing gesture signals, the device containing the software program according to claim 10 (para [0101]).

With respect to claim 20, Ehud et al. teach an input device for inputting handwriting signals and a recognition device for recognizing handwriting signals, the system further comprising a processing device according to claim 11 (para [0051]-[0058] and [0101]).

With respect to claim 12, please refer to rejection for claim 1.

With respect to claim 13, please refer to rejection for claim 2.

With respect to claim 14, please refer to rejection for claim 3.

With respect to claim 15, please refer to rejection for claim 4.

With respect to claim 19, please refer to rejection for claim 8.

8. Claims 1, 5, 12 and 16 are rejected under 35 USC 103(a) as being unpatentable over Jorgensen et al. (US Patetent 6,720,984) in view of Gustafsson ("Determining the Initial States in Forward-Backward Filtering" IEEE Transaction on Signal Processing, Vol. 44 No. 4 April 1996, Pages 988-992).

With respect to claim 1, Jorgensen et al. teach one or more segments, each segments comprising one or more samples (Fig. 8A ref. label 81; col. 6 lines 13-36) , the step of filtering one or more segments by applying an infinite impulse response filter (Fig. 8A ref. label 83; col. 6 lines 13-36, Bessel filter) .

Jorgensen et al. does not teaches expressly that applying an infinite impulse response filter both in a forward and in a backward temporal direction, so as to produce a band-limited signal.

Gustafsson teaches applying an infinite impulse response filter both in a forward and in a backward temporal direction, so as to produce a band-limited signal (Page 988, I. introduction).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply an infinite impulse response filter both in a forward and in a backward temporal direction in the method of Jorgensen et al.

The suggestion/motivation for doing so would have been that to obtain uniqueness and to remove transients at both ends.

Therefore, it would have been obvious to combine Gustafsson with Jorgensen et al. to obtain the invention as specified in claim 1.

With respect to claim 5, Jorgensen et al. teaches step of downsampling the filtered signal (Fig. 8A ref. label 85; col. 6 lines 13-36).

With respect to claim 12, please refer to rejection for claim 1.

With respect to claim 16, please refer to rejection for claim 5.

9. Claims 1, 6, 7, 12, 17 and 18 are rejected under 35 USC 103(a) as being unpatentable over Monro et al. (US Patetent 5,768,437) in view of Gustafsson ("Determining the Initial States in Forward-Backward Filtering" IEEE Transaction on Signal Processing, Vol. 44 No. 4 April 1996, Pages 988-992).

With respect to claim 1, Monro et al teach one or more segments, each segments comprising one or more samples (col. 6 lines 54-63) , the step of filtering one or more segments by applying an infinite impulse response filter (col. 14 lines 31-50).

Monro et al does not teaches expressly that applying an infinite impulse response filter both in a forward and in a backward temporal direction, so as to produce a band-limited signal.

Gustafsson teaches applying an infinite impulse response filter both in a forward and in a backward temporal direction, so as to produce a band-limited signal (Page 988, I. introduction).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply an infinite impulse response filter both in a forward and in a backward temporal direction in the method of Monro et al.

The suggestion/motivation for doing so would have been that to obtain uniqueness and to remove transients at both ends.

Therefore, it would have been obvious to combine Gustafsson with Monro et al. to obtain the invention as specified in claim 1.

With respect to claim 6, Monro et al. teach the step of compressing the signal. (col. 5 line 64 – col. 6 line 3).

With respect to claim 7, Monro et al. teach step of compressing the signal involves entropy encoding. (col. 5 line 64 – col. 6 line 3).

With respect to claim 12, please refer to rejection for claim 1.

With respect to claim 17, please refer to rejection for claim 6.

With respect to claim 18, please refer to rejection for claim 7.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randolph Chu whose telephone number is 571-270-1145. The examiner can normally be reached on Monday to Thursday from 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Werner can be reached on 571-272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RIC/

/Aaron W Carter/
Primary Examiner, Art Unit 2624